

### **REMARKS**

Claims 14-21 are pending in the application. Claim 14, 18, and 20 are amended with this response, wherein no new matter has been added. Reconsideration of the application in light of the following remarks is respectfully requested.

#### **I. REJECTION OF CLAIMS 14-19 UNDER 35 U.S.C. § 102(a)**

Claims 14-19 were rejected under 35 U.S.C. § 102(a) as being anticipated by Applicant's Admitted Prior Art (AAPA) shown in Fig. 7. Claims 14 and 18 have been amended with this response, wherein no new matter has been added. Withdrawal of the rejection is respectfully requested for at least the following reasons.

- i. The photodiode arrangement of claim 14 is neither taught nor suggested in the prior art, wherein a first metallization and a second metallization define a eutectic mixture, and wherein the photodiode and the submount are bonded to one another by means of the eutectic mixture.***

Claims 14 was rejected as being a "product by process" claim. Applicants disagree, as the connection of the photodiode and the submount directly influences final structure of the claimed photodiode arrangement. Claim 14 has been amended to recite a eutectic mixture that is defined by the first metallization of the photodiode and the second metallization of the submount. Claim 14 is thus not a "product by process" claim, and the structural connection or bond of the photodiode to the submount, namely, by the eutectic mixture defined by the first metallization and second metallization, is neither taught nor suggested by Applicant's Admitted Prior Art.

Accordingly, claim 14 and claims 15-19 that are dependent thereon are patentable over the prior art, and withdrawal of the rejection is respectfully requested.

#### **II. REJECTION OF CLAIMS 20-21 UNDER 35 U.S.C. § 103(a)**

Claims 20-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over applicants' admitted prior art and U.S. Patent Publication 2002/0028390 (Mazed).

Claim 20 has been amended with this response, and no new matter has been added. Withdrawal of the rejection is again respectfully requested for at least the following reasons.

- i. Mazed fails to remedy the deficiencies of AAPA in regards to independent claim 14, namely, the teaching or suggestion of a eutectic mixture defined by a first metallization and second metallization, as presently claimed.***

Claims 20 and 21 are believed to be patentable over the cited art, as Mazed fails to remedy the deficiencies of the primary reference with regards to a eutectic mixture being defined by a first metallization of a photodiode and a second metallization of a submount. Further, while Mazed appears to teach a bonding material, no teaching or suggestion is made of a eutectic mixture being defined, as recited in independent claim 20. As such, Mazed fails to remedy the deficiencies of Applicants' Admitted Prior Art in regards to independent claim 14 and thus, dependent claims 20 and 21 are further non-obvious over the cited art. Withdrawal of the rejection is respectfully requested.

- ii. The structures described by Mazed are not a photodiode and submount that are connected by means of a eutectic mixture, wherein one of the photodiode and the submount comprise a trench or cutout on the side facing the other of the photodiode and the submount, as recited in claim 21.***

In Figs. 1A -1C, Mazed appears to teach a distributed feedback ridge laser array (see, e.g., Mazed, paragraph 40). ***Clearly, such a laser array is not the photodiode and submount connected by means of a eutectic mixture, as presently claimed.***

Further, Fig. 5A of Mazed appears to illustrate the use of a phase shifted phase mask to expose a substrate, with reference to numeral 70 as being identified as a phase mask (see, e.g., Mazed, paragraph 91). It is uncertain how the grating pattern of the phase mask used to expose a substrate, as illustrated in Fig. 5A of Mazed, is related to trenches or cut-outs in a photodiode or submount, and one of ordinary skill in

the art would understand that ***the phase mask of Fig. 5A of Mazed is not comparable to trenches or cut-outs in a photodiode or submount.***

Accordingly, for this additional reason, claim 21 is further believed to be non-obvious over the cited art, and withdrawal of the rejection of claim 21 is again respectfully requested.

**III. CONCLUSION**

The claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, MAIKP141WOUS.

Respectfully submitted,  
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